WHAT IS CLAIMED IS:

1. A solar cell comprising:

a dopant diffusion layer formed on a side of a light-receiving surface of a silicon wafer;

a light-receiving surface passivation film formed on said dopant diffusion layer, said light-receiving surface passivation film having an opening portion; and

a light-receiving surface electrode formed on the opening portion of said light-receiving surface passivation film, wherein

said dopant diffusion layer has a first region covered with said light-receiving surface passivation film and a second region under the opening portion of said light-receiving surface passivation film, and there is a difference between a dopant concentration in said first region and a dopant concentration in said second region.

2. The solar cell according to claim 1, wherein

said light-receiving surface passivation film is any one of a silicon oxide film, an amorphous silicon film, a silicon nitride film, a titanium oxide film, and an aluminum oxide film.

3. The solar cell according to claim 1, wherein

the opening portion of said light-receiving surface passivation film in the light-receiving surface of the silicon wafer has the same shape and size as a portion where said light-receiving surface electrode is formed, and a selective emitter cell structure is formed where a dopant is diffused at high concentration only in a portion in contact with said light-receiving surface electrode.

4. The solar cell according to claim 1, wherein

the opening portion of said light-receiving surface passivation film in the light-receiving surface of the silicon wafer is larger than a portion where said light-receiving surface electrode is formed, whereby even if

misalignment occurs in forming said light-receiving surface electrode, said light-receiving surface electrode is formed on a portion where a dopant is diffused at high concentration.

5. The solar cell according to claim 1, further comprising a back surface passivation film formed on a back surface of said silicon wafer, said back surface passivation film having an opening portion, wherein

a back surface field layer that is a dopant diffusion layer on a side of the back surface of said silicon wafer is formed at least in a region under the opening portion of said back surface passivation film on the side of the back surface of said silicon wafer.

6. The solar cell according to claim 5, wherein

said back surface passivation film is any one of a silicon oxide film, an amorphous silicon film, and a silicon nitride film.

7. A method of manufacturing a solar cell, comprising:

a step of forming, on a light-receiving surface of a silicon wafer, a light-receiving surface passivation film having an opening portion; and

a light-receiving surface dopant diffusion step of forming, on a side of the light-receiving surface of said silicon wafer, a dopant diffusion layer having a difference between a dopant concentration in a first region covered with said light-receiving surface passivation film and a dopant concentration in a second region under the opening portion of said light-receiving surface passivation film, wherein

in said light-receiving surface dopant diffusion step, a PN junction is formed by applying an organic solvent solution containing a dopant onto the silicon wafer using a spin coater and introducing said silicon wafer in a furnace to diffuse the dopant into said silicon wafer.

8. The method of manufacturing a solar cell according to claim 7, wherein

said organic solvent solution containing a dopant is an organic

solvent solution containing a dopant and titanium.

9. A method of manufacturing a solar cell, comprising:

a step of forming, on a light-receiving surface of a silicon wafer, a light-receiving surface passivation film having an opening portion; and

a light-receiving surface dopant diffusion step of forming, on a side of the light-receiving surface of said silicon wafer, a dopant diffusion layer having a difference between a dopant concentration in a first region covered with said light-receiving surface passivation film and a dopant concentration in a second region under the opening portion of said light-receiving surface passivation film, wherein

in said light-receiving surface dopant diffusion step, a PN junction is formed by diffusing a solution containing a dopant rendered in a gaseous state into the silicon wafer.

10. A method of manufacturing a solar cell, comprising:

a step of forming, on a light-receiving surface of a silicon wafer, a light-receiving surface passivation film having an opening portion; and

a light-receiving surface dopant diffusion step of forming, on a side of the light-receiving surface of said silicon wafer, a dopant diffusion layer having a difference between a dopant concentration in a first region covered with said light-receiving surface passivation film and a dopant concentration in a second region under the opening portion of said light-receiving surface passivation film, wherein

in said light-receiving surface dopant diffusion step, a PN junction is formed by supplying a dopant into the silicon wafer through ion implantation.

11. A method of manufacturing a solar cell, comprising:

a step of forming, on a light-receiving surface of a silicon wafer, a light-receiving surface passivation film having an opening portion;

a step of forming, on a back surface of said silicon wafer, a back surface passivation film having an opening portion;

a light-receiving surface dopant diffusion step of forming, on a side of the light-receiving surface of said silicon wafer, a dopant diffusion layer having a difference between a dopant concentration in a first region covered with said light-receiving surface passivation film and a dopant concentration in a second region under the opening portion of said light-receiving surface passivation film; and

a back surface dopant diffusion step of forming a back surface field layer on a side of the back surface of said silicon wafer, wherein

in said back surface dopant diffusion step, a localized back surface field layer structure is formed by applying a paste including aluminum to the back surface of said silicon wafer by screen-printing and introducing said silicon wafer in a furnace to form the back surface field layer only in a region under the opening portion of said back surface passivation film on the side of the back surface of said silicon wafer.

12. A method of manufacturing a solar cell, comprising:

a step of forming, on a light-receiving surface of a silicon wafer, a light-receiving surface passivation film having an opening portion;

a step of forming, on a back surface of said silicon wafer, a back surface passivation film having an opening portion;

a light-receiving surface dopant diffusion step of forming, on a side of the light-receiving surface of said silicon wafer, a dopant diffusion layer having a difference between a dopant concentration in a first region covered with said light-receiving surface passivation film and a dopant concentration in a second region under the opening portion of said light-receiving surface passivation film; and

a back surface dopant diffusion step of forming a back surface field layer on a side of the back surface of said silicon wafer, wherein

in said back surface dopant diffusion step, a localized back surface field layer structure is formed by diffusing a solution containing a dopant rendered in a gaseous state into the back surface of said silicon wafer to form the back surface field layer only in a region under the opening portion of said back surface passivation film on the side of the back surface of said

silicon wafer.

13. A method of manufacturing a solar cell, comprising:

a step of forming, on a light-receiving surface of a silicon wafer, a light-receiving surface passivation film having an opening portion;

a step of forming, on a back surface of said silicon wafer, a back surface passivation film having an opening portion;

a light-receiving surface dopant diffusion step of forming, on a side of the light-receiving surface of said silicon wafer, a dopant diffusion layer having a difference between a dopant concentration in a first region covered with said light-receiving surface passivation film and a dopant concentration in a second region under the opening portion of said light-receiving surface passivation film; and

a back surface dopant diffusion step of forming a back surface field layer on a side of the back surface of said silicon wafer, wherein

in said back surface dopant diffusion step, a localized back surface field layer structure is formed by supplying a dopant to the back surface of said silicon wafer through ion implantation to form the back surface field layer only in a region under the opening portion of said back surface passivation film on the side of the back surface of said silicon wafer.